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**SERVICE BULLETIN****N° 139-469****OPTIONAL****DATE:** May 26, 2017**REV. :** A - August 4, 2023

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**TITLE****ATA 30 - PASSENGER CABIN DRAINAGES INSTALLATION****REVISION LOG**

Helicopters already compliant with previous issues of this Service Bulletin do not need any additional action.

Revision A is issued in order to introduce the following changes:

- update the effectivity;
- update the accomplishment instructions, required materials and figures in accordance to the latest design;
- update the Service Bulletin to the latest standard.

Due to the large amount of modifications introduced in this new revision, revision bars are not shown.

# 1. PLANNING INFORMATION

## A. EFFECTIVITY

All AB139/AW139 helicopters from S/N 31005 to S/N 31157 (except S/N 31007) and from S/N 41001 to S/N 41023.

All AW139 helicopters from S/N 31201 to S/N 31398 and from S/N 41201 to S/N 41293.

All AW139 helicopters from S/N 31400 to S/N 31699, from S/N 41300 to S/N 41499, from S/N 31700 onwards and from S/N 41500 onwards.

## B. COMPLIANCE

At Customer's option.

## C. CONCURRENT REQUIREMENTS

N.A.

## D. REASON

This Service Bulletin is issued in order to provide all necessary instructions on how to perform the passenger cabin drainage installation P/N 3G3070A12711.

LH issued this SB for the following reason:

Helicopter Reliability/Maintainability	
Product Improvement	
Obsolescence	
Customization	✓
Product/Capability Enhancement	

## E. DESCRIPTION

This Service Bulletin provides the necessary instruction on how to perform the passenger cabin drainage installation P/N 3G3070A12711.

The retromod allow the installation of n°2 LH an RH pipes under the passenger cabin floor to improve the water drainage when the sea tray is installed on the helicopter.

## F. APPROVAL

The technical content of this Service Bulletin is approved under the authority of DOA nr. EASA.21.J.005. For helicopters registered under other Aviation Authorities, before applying the Service Bulletin, applicable Aviation Authority approval must be checked within Leonardo Helicopters customer portal.

EASA states mandatory compliance with inspections, modifications or technical directives and related time of compliance by means of relevant Airworthiness Directives.

If an aircraft listed in the effectivity embodies a modification or repair not LHD certified and affecting the content of this Service Bulletin, it is responsibility of the Owner/Operator to obtain a formal approval by Aviation Authority having jurisdiction on the aircraft, for any adaptation necessary before incorporation of the present Service Bulletin.

## G. MANPOWER

To comply with this Service Bulletin approximately eighteen (18) MMH are deemed necessary.

MMH are based on hands-on time and can change with helicopter configuration, personnel and facilities available. MMH are not comprehensive of the overall hours necessary to get access to work areas and to remove all the equipment that interferes with the application of the prescribed instructions.

## H. WEIGHT AND BALANCE

WEIGHT (kg)	ARM (mm)	MOMENT (kg-mm)
		0.675
<b>LONGITUDINAL BALANCE</b>	5587.0	3771.0
<b>LATERAL BALANCE</b>	0	0

## I. REFERENCES

### I.1 PUBLICATIONS

Following Data Modules refer to AMP:

<u>DATA MODULE</u>	<u>DESCRIPTION</u>	<u>PART</u>
DM01 39-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance	-
DM02 39-A-06-41-00-00A-010A-A	Access doors and panels - General data	-
DM03 39-A-53-23-03-00A-520A-K	Aft cabin floor reinforcement - Remove procedure	-
DM04 39-A-53-23-03-00A-720A-A	Aft cabin floor reinforcement - Install procedure	-

Following Data Modules refer to CSRP:

<u>DATA MODULE</u>	<u>DESCRIPTION</u>	<u>PART</u>
DM05 CSRP-A-51-42-00-00A-720A-D	Potted Inserts - Install procedure	-

## **I.2 ACRONYMS & ABBREVIATIONS**

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
AR	As Required
CSR	Common Structural Repair Publication
DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
FWD	Forward
IPD	Illustrated Part Data
ITEP	Illustrated tool and equipment publication
LH	Left Hand
LHD	Leonardo Helicopters Division
MMH	Maintenance Man Hours
N.A.	Not Applicable
P/N	Part Number
RH	Right Hand
SB	Service Bulletin
S/N	Serial Number

## **I.3 ANNEX**

N.A.

## **J. PUBLICATIONS AFFECTED**

AW139 Aircraft Maintenance Publication (AMP)

AW139 Illustrated Parts Data (IPD)

## **K. SOFTWARE ACCOMPLISHMENT SUMMARY**

N.A.

## 2. MATERIAL INFORMATION

### A. REQUIRED MATERIALS

#### A.1 PARTS

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	3G3070A12711		DRAINAGE INSTALLATION	REF	.		-
2	3G5311A10511		DRAINAGES STRUCTURAL PROVISION	REF	..		-
3	3G3070A13231		Bracket assy LH	1	...		139-469L1
4	3G3070A13331		Bracket assy RH	1	...		139-469L1
5	3G5310A97251		Sump cover	2	...		139-469L1
6	999-5001-10-132	AW010FP132	Plug button	2	...		139-469L1
7	NAS1802-3-6		Screw	4	...		139-469L1
8	NAS1721H4L3A		Rivet	4	...		139-469L1
9	NAS1149D0332K		Washer	4	...		139-469L1
10	NAS1836-3-13		Insert	8	...		139-469L1
11	3G3070A13931		Drainage pipe assy	2	..		139-469L1
12	3G5310A96731		Drain sump assy	2	..		139-469L1
13	AN735D12		Clamp	2	..		139-469L1
14	NAS1802-3-6		Screw	4	..		139-469L1
15	MS27039-1-31		Screw	2	..		139-469L1
16	NAS1149D0316K		Washer	2	..		139-469L1
17	NAS1149D0332K		Washer	6	..		139-469L1
18	NAS43DD3-90N		Spacer	2	..		139-469L1

Refer also to IPD for the spares materials required to comply with the AMP DMs referenced in the accomplishment instructions.

#### A.2 CONSUMABLES

The following consumable materials, or equivalent, are necessary to accomplish this Service Bulletin:

#	SPEC./LHD CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
19	MMM-A-132 Type I, Class 3 Code No. 900004603 199-05-002 Type II, Class 2	Adhesive EA934NA (C057)	AR	(1)	-
20	AWTR033	Fiberglass fabric 20749-1200 (C931)	AR	(1)	-
21	199-50-002 Type II	Hardener HY5173	AR	(1)	-
22	199-50-002 Type I	Araldite resin LY5138-2	AR	(1)	-
23	AMS-S-8802 Type II, Class B-2 Code 99999999000015246 199-05-004 Type II, Class B2	Sealant Proseal 890 or MC780	AR	(1)	-

Refer also to AMDI for the consumable materials required to comply with the AMP DMs referenced in the accomplishment instructions.

#### A.3 LOGISTIC MATRIX

In order to apply this Service Bulletin, the following Logistic P/N can be ordered in accordance with the applicable notes:

LOGISTIC P/N	Q.TY (PER HELO)	NOTE	PART
139-469L1	1		-

**NOTES**

(1) Item to procured as local supply.

**B. SPECIAL TOOLS**

Refer to ITEP for the special tools required to comply with the AMP DMs referenced in the accomplishment instructions.

**C. INDUSTRY SUPPORT INFORMATION**

Customization.

### **3. ACCOMPLISHMENT INSTRUCTIONS**

#### **GENERAL NOTES**

- a) Place an identification tag on all components that are re-usable, including the attaching hardware that has been removed to gain access to the modification area and adequately protect them until their later re-use.
  - b) Shape the cables in order to prevent interference with the structure and the other existing installations, using where necessary suitable lacing cords.
  - c) Exercise extreme care during drilling operations to prevent instruments, cables and hoses damage.
  - d) After drilling, remove all swarf and sharp edges. Apply on bare metal a light film of primer unless the hole is used for ground connection.
  - e) During the installation of bonding braids or components requiring grounding, clean the surface structure in order to obtain a good ground contact.
  - f) Let adhesive cure at room temperature for at least 24 hours unless otherwise specified.
  - g) All lengths are in mm.
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1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
  2. In accordance with AMP DM 39-A-06-41-00-00A-010A-A and with reference to Figures 1 thru 6, remove all external panels, internal panels and internal liners as required to gain access to the area affected by the installation and perform the drainages installation P/N 3G3070A12711 on LH side as described in the following procedure:
    - 2.1 In accordance with AMP DM 39-A-53-23-03-00A-520A-K and with reference to Figure 1, remove the aft floor complete panel assy reinforced P/N 3G5332A05933 from the helicopter.
    - 2.2 With reference to Figure 1 Section A-A and Figure 2 Section C-C, install the bracket assy LH P/N 3G3070A13231 in the indicated position by means of n°2 rivets P/N NAS1721H4L3A.

- 2.3 With reference to Figure 5 Section K-K, temporarily secure the drainage pipe assy P/N 3G3070A13931 to the bracket assy LH P/N 3G3070A13231 with a washer P/N NAS1149D0316K, a spacer P/N NAS43DD3-90N, a clamp P/N AN735D12, a washer P/N NAS1149D0332K and a screw P/N MS27039-1-31.
- 2.4 With reference to Figure 3 Section B-B, mark the position of the hole to drill on the passenger compartment subfloor, coordinating with the drainage pipe assy position.
- 2.5 Remove the drainage pipe assy P/N 3G3070A13931 and relevant hardware from the helicopter.
- 2.6 With reference to Figure 3 Section B-B, drill hole  $\varnothing 21.0$  thru the passenger compartment subfloor in the previously marked position.
- 2.7 With reference to Figure 3 Detail F, fill the honeycomb edge with adhesive EA934NA (C057).
- 2.8 Prepare a compound mixing 100 parts by weight of araldit resin LY5138-2 and 23 parts by weight of hardener HY5173.
- 2.9 With reference to Figure 3 Detail F, apply around the drilled hole n°2 plies of fiberglass fabric 20749-1200 (C931) soaked with the previously prepared compound. Let adhesive cure.
- 2.10 With reference to Figure 3 Section B-B, temporarily re-install the drainage pipe assy P/N 3G3070A13931 (Ref. step 2.3) and countermark on the passenger subfloor panel the positions of the n°2 insert holes to drill.
- 2.11 Remove the drainage pipe assy P/N 3G3070A13931 and relevant hardware from the helicopter.
- 2.12 In accordance with CSRP DM CSRP-A-51-42-00-00A-720A-D and with reference to Figure 3 Section B-B and Section E-E, drill n°2 holes  $\varnothing 11.48 \div 11.60$  in the previously countermarked positions and install n°2 inserts P/N NAS1836-3-13 by means of adhesive EA934NA (C057).
- 2.13 With reference to Figure 6 Section H-H, secure the drainage pipe assy P/N 3G3070A13931 to the passenger compartment subfloor by means of n°2 washers P/N NAS1149D0332K and n°2 screws P/N NAS1802-3-6.
- 2.14 With reference to Figure 5 Section K-K, secure the drainage pipe assy P/N 3G3070A13931 to the bracket assy LH P/N 3G3070A13231 with a washer P/N NAS1149D0316K, a spacer P/N NAS43DD3-90N, a clamp P/N AN735D12, a washer P/N NAS1149D0332K and a screw P/N MS27039-1-31.
- 2.15 With reference to Figure 1 Section A-A, drill hole  $\varnothing 35.0$  thru aft floor complete panel assy reinforced P/N 3G5332A05933 in the indicated position; coordinate the hole position with the installed drainage pipe assy P/N 3G3070A13931.



- 2.16 With reference to Figure 2 Detail D, chamfer 2mm x45° the upper hole edge.
- 2.17 With reference to Figure 2 Detail D, fill the honeycomb edge with adhesive EA934NA (C057).
- 2.18 Prepare a compound mixing 100 parts by weight of araldit resin LY5138-2 and 23 parts by weight of hardener HY5173.
- 2.19 With reference to Figure 2 Detail D, apply around the drilled hole n°2 plies of fiberglass fabric 20749-1200 (C931) soaked with the previously prepared compound. Let adhesive cure.
- 2.20 With reference to Figure 4 Section G-G and Figure 5 Section J-J, temporarily position the drain sump assy P/N 3G5310A96731 in its installation position; countermark on the panel the positions of the n°2 insert holes to drill.
- 2.21 In accordance with CSRP DM CSRP-A-51-42-00-00A-720A-D and with reference to Figure 1 Section A-A and Figure 2 Section C-C, drill n°2 holes Ø 11.48÷11.60 in the previously countermarked positions and install n°2 inserts P/N NAS1836-3-13 by means of adhesive EA934NA (C057).
- 2.22 With reference to Figure 5 Section J-J, install the drain sump assy P/N 3G5310A96731 by means of n°2 washers P/N NAS1149D0332K and n°2 screws P/N NAS1802-3-6.
- 2.23 With reference to Figure 6 Section L-L, seal the edge of the drainage pipe assy P/N 3G3070A13931 with sealant PROSEAL 890 (C153).
3. Perform step 2 again for RH side drainages installation.
4. In accordance with AMP DM 39-A-53-23-03-00A-720A-A, reinstall the aft floor panel assy P/N 3G5332A05933 on the helicopter.
5. In accordance with AMP DM 39-A-06-41-00-00A-010A-A, reinstall all external panels, internal panels and internal liners previously removed.
6. In accordance with weight and balance changes, update the Chart A (see Rotorcraft Flight Manual, Part II, section 6).
7. Return the helicopter to flight configuration and record for compliance with this Service Bulletin on the helicopter logbook.
8. Gain access to My Communications section on Leonardo WebPortal and compile the "Service Bulletin Application Communication".

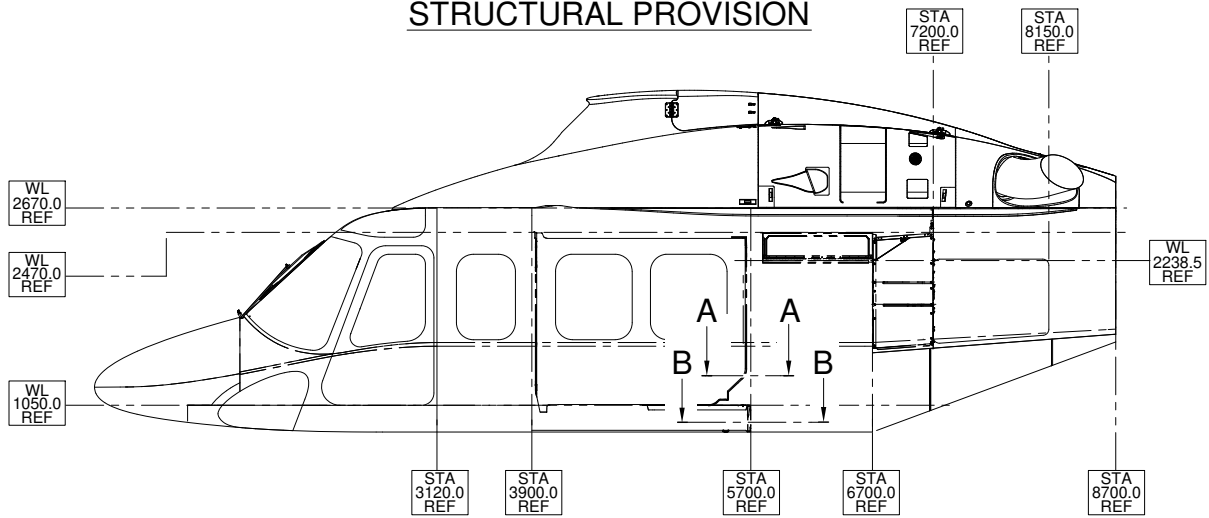
As an alternative, send the attached compliance form to the following mail box:

[engineering.support.lhd@leonardo.com](mailto:engineering.support.lhd@leonardo.com)

and (for North, Central and South America) also to:

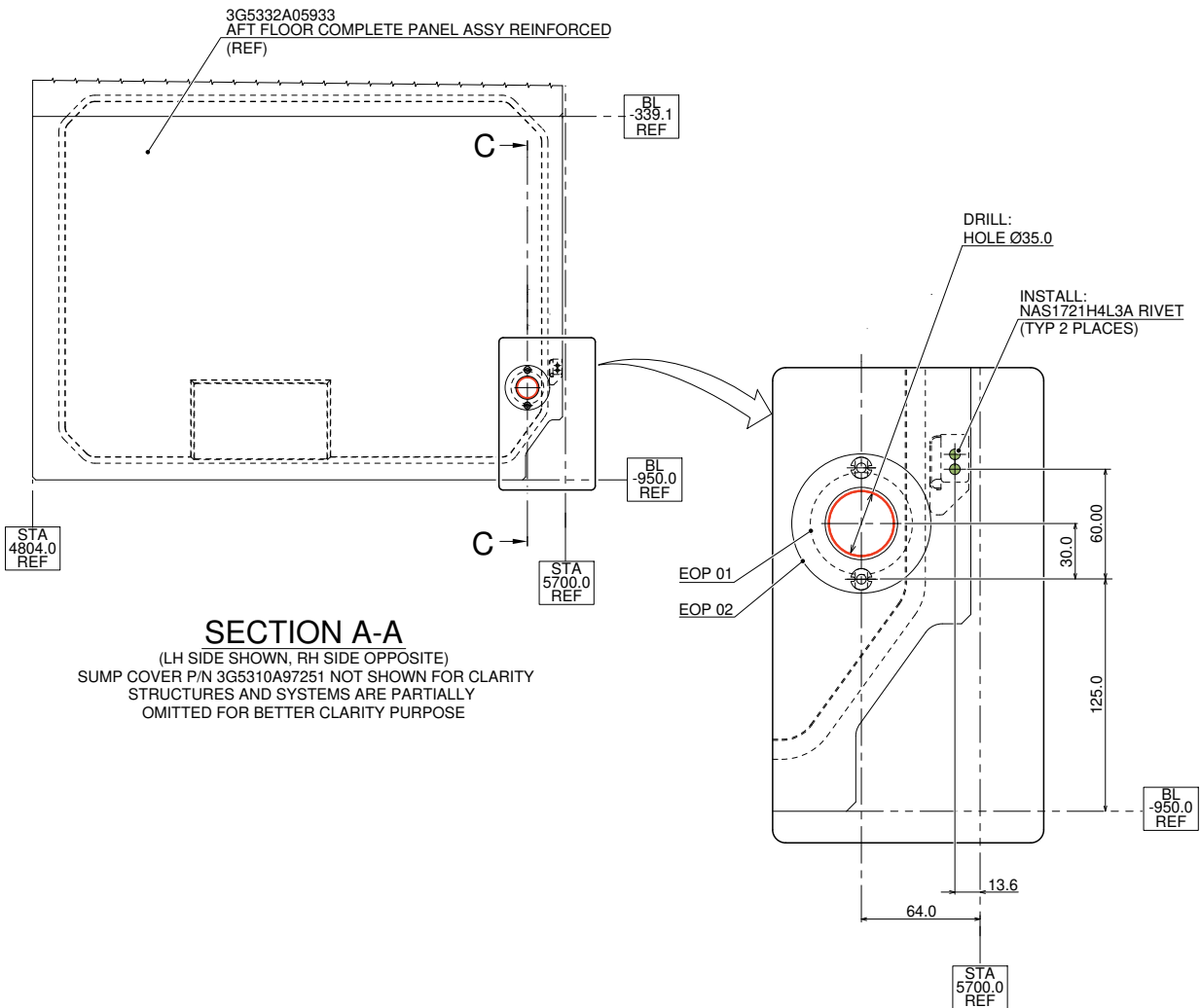
[AWPC.Engineering.Support@leonardocompany.us](mailto:AWPC.Engineering.Support@leonardocompany.us)

**3G5311A10511  
DRAINAGES  
STRUCTURAL PROVISION**



**VIEW LOOKING INBOARD LEFT SIDE**

STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

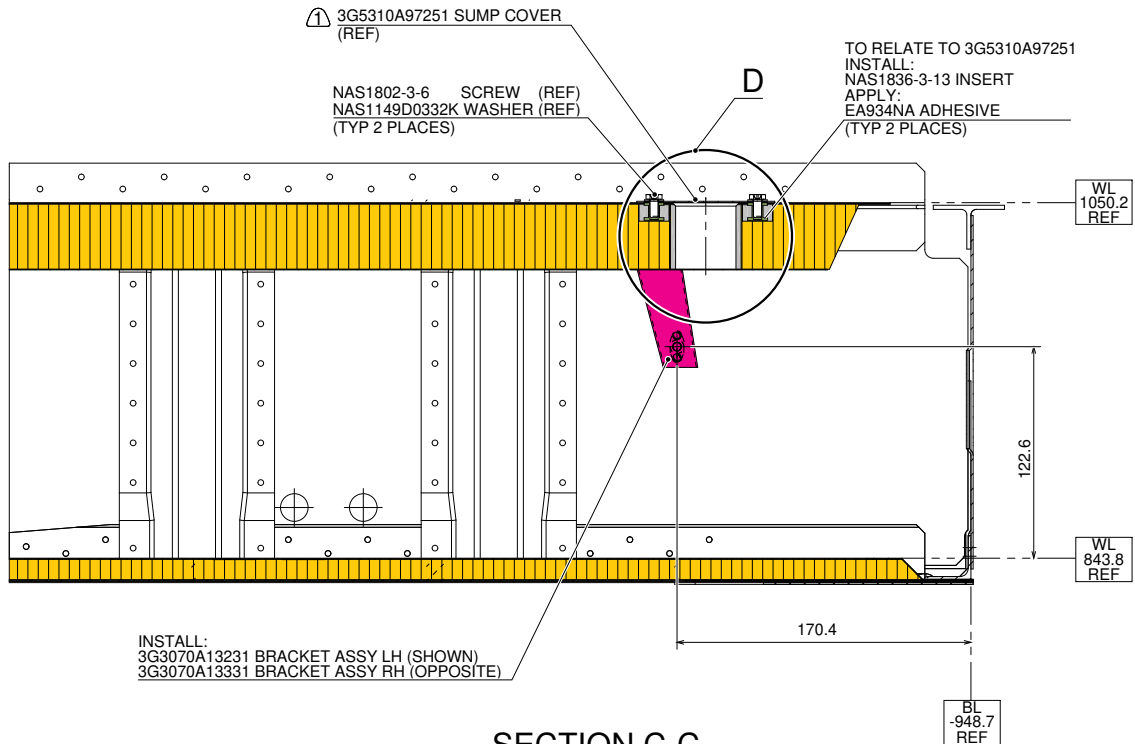


**Figure 1**

S.B. N°139-469 OPTIONAL  
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REVISION: A - August 4, 2023

**NOTE:**

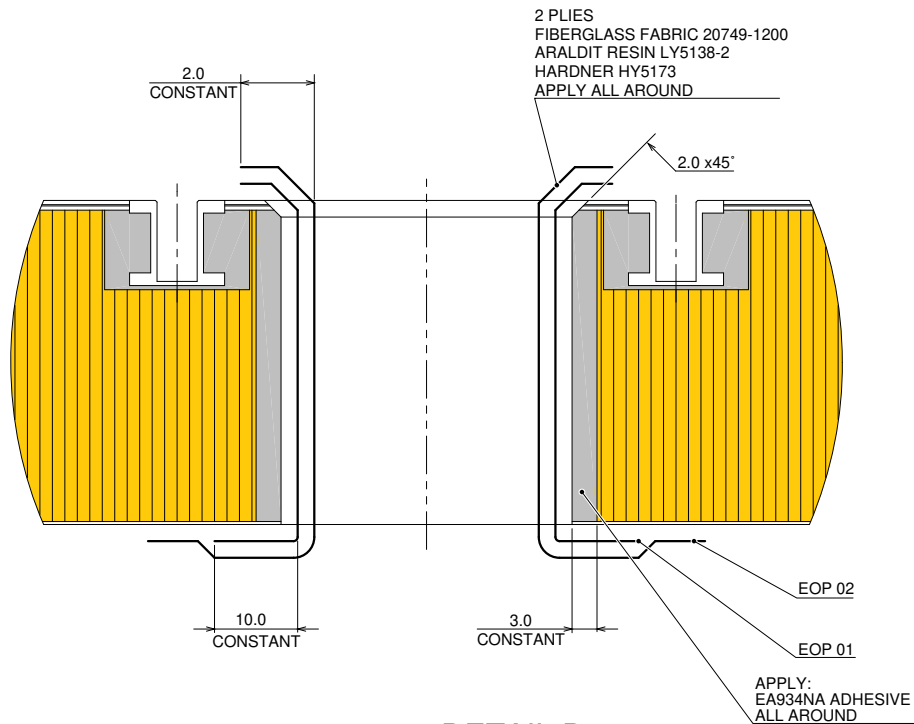
⚠ USE SUMP COVER P/N 3G5310A97251 TO CLOSE THE HOLE WHEN DRAIN SUMP ASSY P/N 3G5310A96731 IS NOT INSTALL.



**SECTION C-C**

(ROTATED 90° CCW)

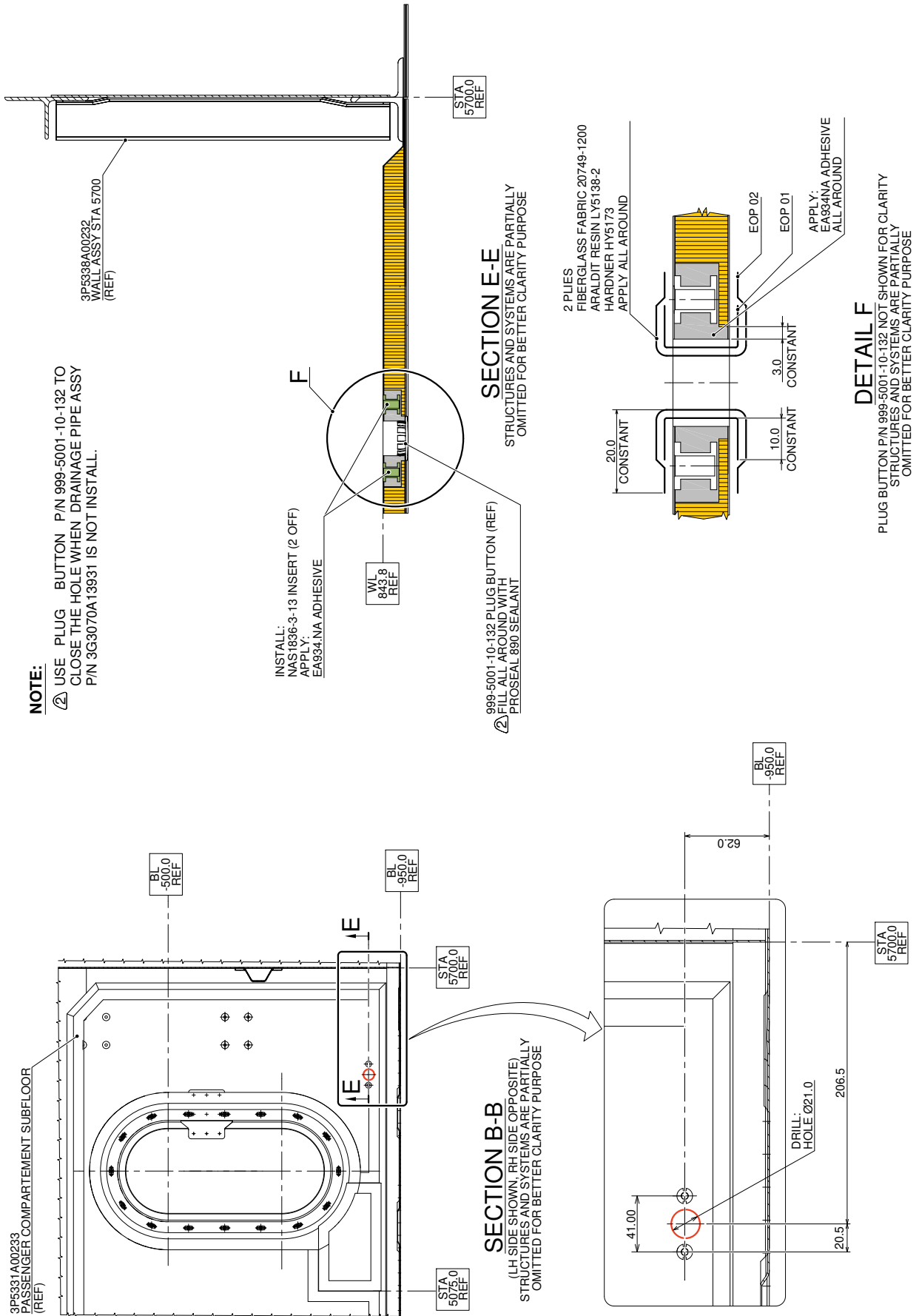
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE



**DETAIL D**

SUMP COVER P/N 3G5310A97251 NOT SHOWN FOR CLARITY  
STRUCTURES AND SYSTEMS ARE PARTIALLY OMITTED FOR BETTER CLARITY PURPOSE

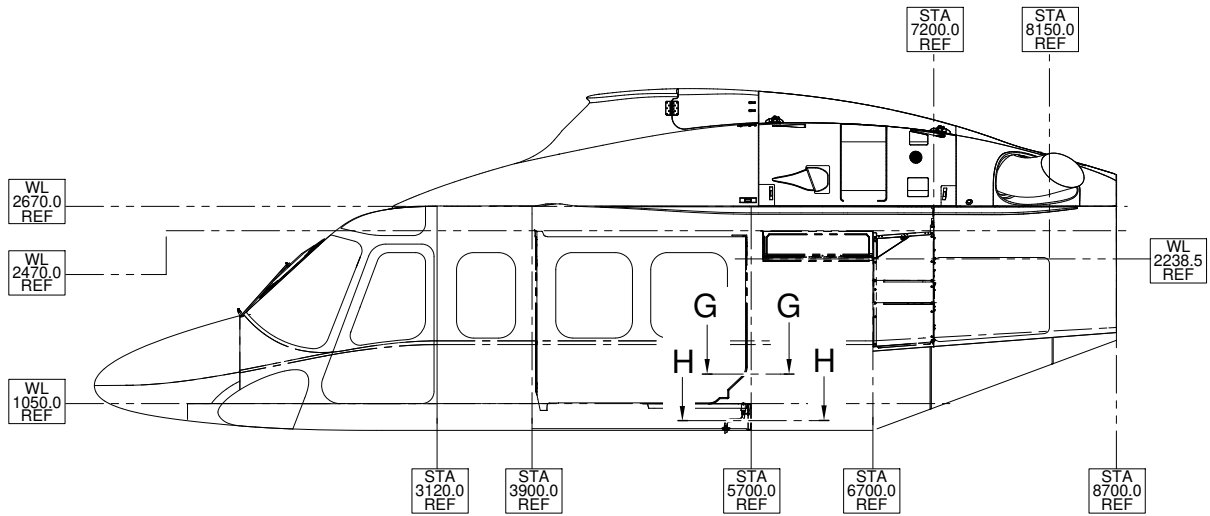
**Figure 2**



**Figure 3**

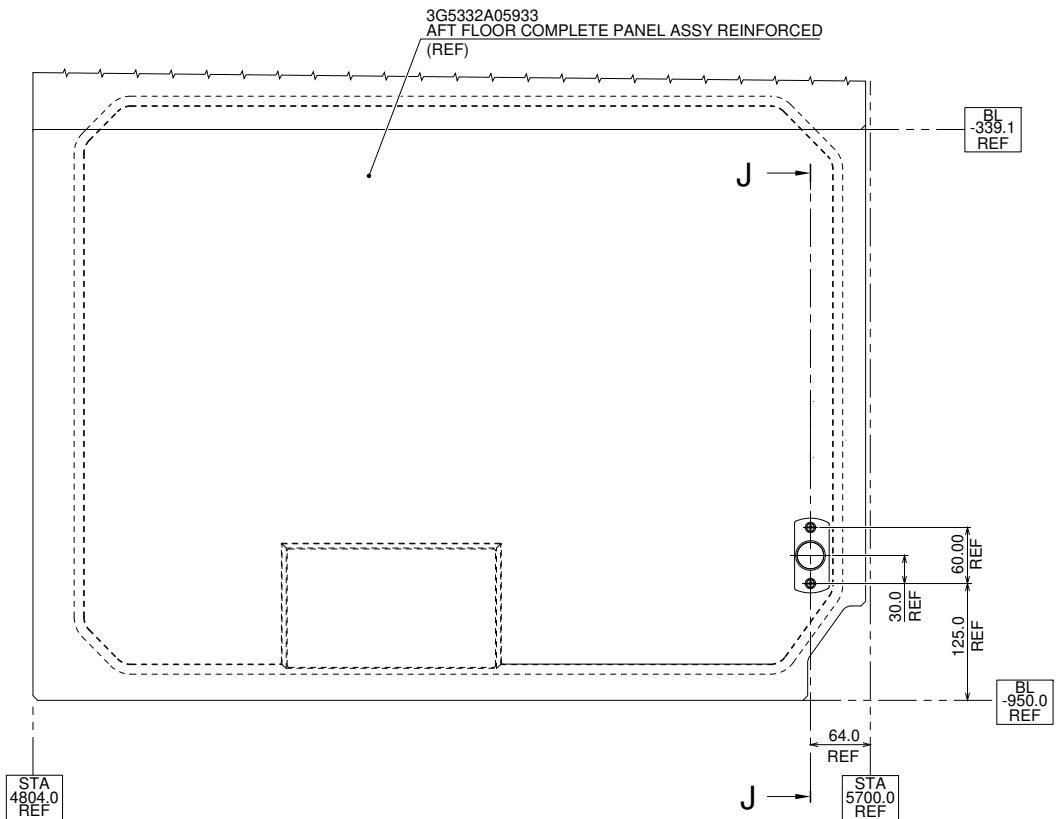
S.B. N°139-469 OPTIONAL  
 DATE: May 26, 2017  
 REVISION: A - August 4, 2023

**3G3070A12711**  
**DRAINAGES INSTALLATION**



**VIEW LOOKING INBOARD LEFT SIDE**

STRUCTURES AND SYSTEMS ARE PARTIALLY  
OMITTED FOR BETTER CLARITY PURPOSE



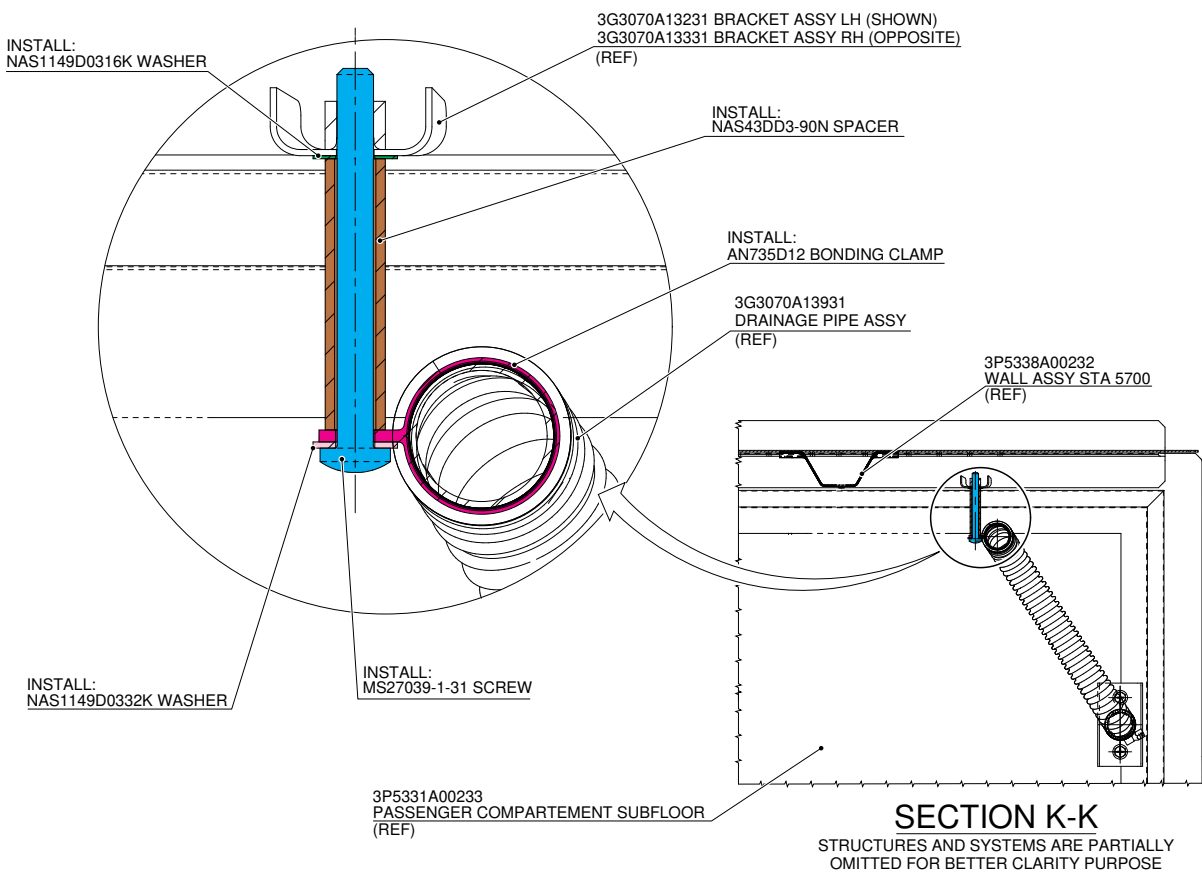
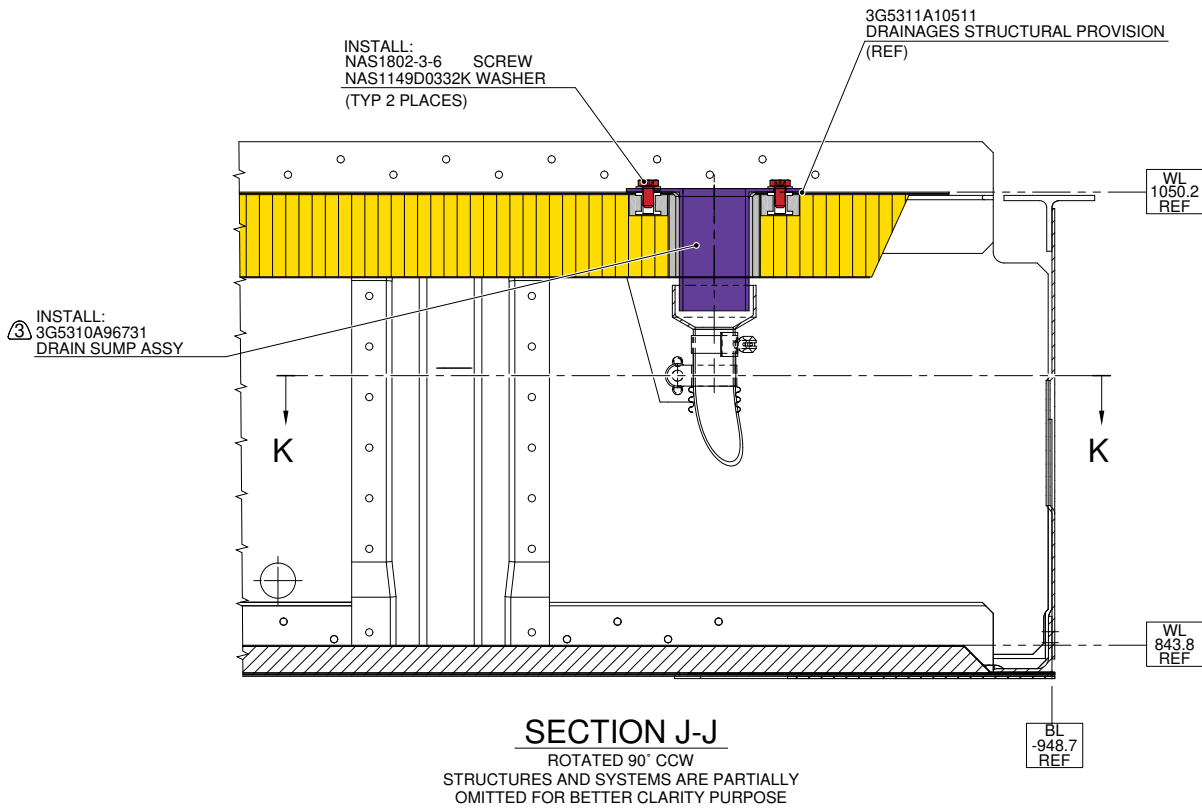
**SECTION G-G**

(LH SIDE SHOWN, RH SIDE OPPOSITE)  
STRUCTURES AND SYSTEMS ARE PARTIALLY  
OMITTED FOR BETTER CLARITY PURPOSE

**Figure 4**

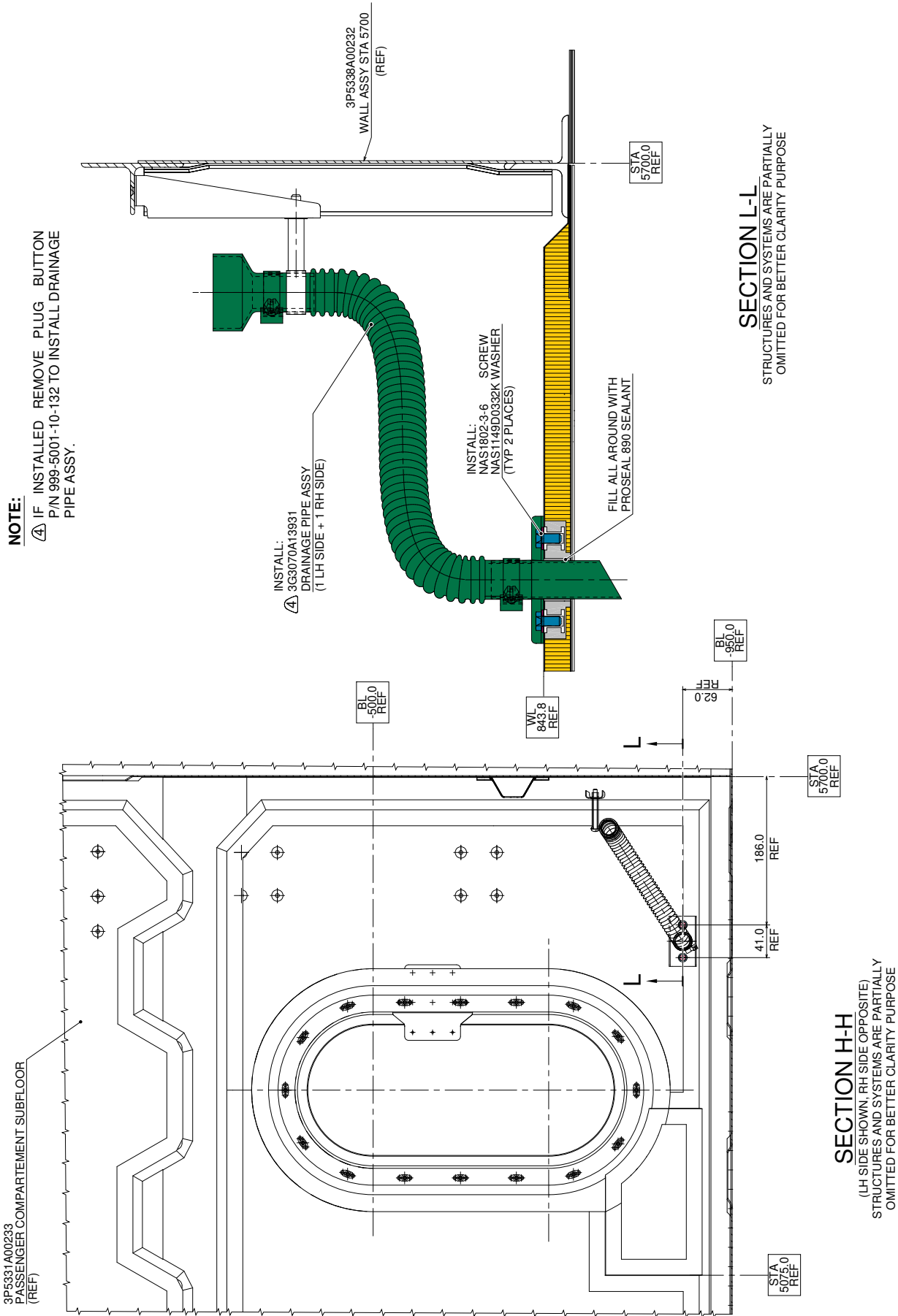
**NOTE:**

ⓐ IF INSTALLED REMOVE SUMP COVER P/N 3G5310A97251 TO INSTALL DRAIN SUMP ASSY.



**Figure 5**

S.B. N°139-469 OPTIONAL  
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**Figure 6**

Please send to the following address:  <b>LEONARDO S.p.A.</b> <b>CUSTOMER SUPPORT &amp; SERVICES - ITALY</b>  <b>PRODUCT SUPPORT ENGINEERING &amp; LICENSES DEPT.</b> Via Giovanni Agusta, 520 21017 Cascina Costa di Samarate (VA) - ITALY Tel.: +39 0331 225036 Fax: +39 0331 225988	<b>SERVICE BULLETIN COMPLIANCE FORM</b>	Date:
	Number:	
	Revision:	

Customer Name and Address:	Telephone:
	Fax:
	B.T. Compliance Date:

Helicopter Model	S/N	Total Number	Total Hours	T.S.O.

Remarks:

**Information:**

We request your cooperation in filling this form, in order to keep out statistical data relevant to aircraft configuration up-to-date. The form should be filled in all its parts and sent to the above address or you can communicate the application also via Technical Bulletin Application Communication Section placed in Leonardo AW Customer Portal - MyCommunications Area. We thank you beforehand for the information given.